REMARKS

This Amendment is in response to the Office Action, dated November 26, 2008 ("Office Action"). It is respectfully submitted that the application is in condition for allowance. Claims 1, 4-16 and 18-22 are pending (claims 2 and 17 having been previously cancelled), with claims 18-22 withdrawn. Claims 1, 4-16 and 18-20 have been amended and claim 3 has been cancelled by virtue of the present amendment. No new matter has been added. Allowance and reconsideration of the application in view of Applicant's amendment and the ensuing remarks are respectfully requested.

Claim 1 has been amended to recite that the claimed polypeptide comprises between 14 and 18 amino acids, to limit the leucine substitution to tryptophan and to delete "analogue" from the claim. Support for the amendment may be found throughout the specification; for example, on page 7, paragraph 3.

Claims 4-16 and 18-20 have also been amended to delete "analogue."

Claim 4 has been amended to delete certain amino acids to be consistent with the amendment to claim 1.

Claim 5 has been amended to recite that "at least one further *Leucine* amino acid is replaced with Phenylalanine (F)."

Claim 19 has been amended to correct for proper antecedent basis.

In the Office Action, the Examiner acknowledged Applicant's election of Group I. The restriction requirement was deemed by the Examiner to be proper and therefore made final in the present Office Action.

The application was objected to as failing to clearly identify all sequences (including ones appearing in tables and/or drawings) by a sequence identifier. The Examiner also asserted that discrepancies exist between the claimed sequences and the paper sequence listing.

As shown in the "Amendments to the Specification" section above, Table 1 on page 6 of the specification has been amended to include a sequence identifier for each of the sequences listed in the table. Additionally, a substitute sequence listing is filed

herewith to provide the sequences previously provided in the specification, but inadvertently omitted from the sequence listing. Applicant respectfully requests entrance of the substitute sequence listing as part of the application. No new matter is added to the substitute sequence listing. In light of the foregoing, Applicant respectfully requests the withdrawal of this objection.

Figures 9 and 10 were objected to as being illegible. Accordingly, Applicant submits herewith corrected drawing sheets in compliance with 37 C.F.R. §1.121(d). Each drawing sheet is labeled "Replacement Sheet." Figures 9 and 10 are legible on the replacement sheets. No new matter has been added. Since no changes are being made, annotated versions of the figures are not accompanying this response. In light of the foregoing, Applicant respectfully requests withdrawal of this objection.

The Examiner confirmed that Applicant's Information Disclosure Statement, filed on March 14, 2008, was considered. Applicant thanks the Examiner for returning an initialled copy of the PTO/SB/08 Form.

The title was objected to as being non-descriptive. As shown in the "Amendments to the Specification" section above, and in accordance with the Examiner's suggestion, the title has been amended to read "Antiviral Polypeptides Comprising Tandem Repeats of apo$E_{141-149}$ and Variants Thereof." In light of this amendment, Applicant respectfully requests the withdrawal of this objection.

Claims 1 and 3-16 were rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite. The Examiner found that the claims of the present invention are directed to polypeptides comprising apo$E_{141-149}$ tandem repeats, derivatives thereof, analogues thereof, or truncations thereof. Although the term "derivative or analogue thereof" is defined by the specification, the Examiner contended that the difference between a polypeptide derivative and a polypeptide analogue is not apparent. Additionally, the Examiner noted that certain claimed sequences are not present in the paper sequence listing, which render claims 6 and 9 vague and indefinite. With respect

to cancelled claim 3, this rejection is moot. With respect to the remaining claims, Applicant respectfully traverses this rejection.

Applicant submits that claims 1 and 4-16 are not indefinite. While Applicant in no way concedes to the merits of the Examiner's rejection, in the interest of advancing prosecution, the claims have been amended to remove "analogue." Accordingly, the "derivatives thereof" is clear as the term is defined in the specification.

With respect to the sequences, as noted above, submitted herewith is a substitute sequence listing. Therefore, Applicant submits that claims 6 and 9 are not indefinite. In light of the foregoing, Applicant respectfully requests withdrawal of this rejection under 35 U.S.C. §112, second paragraph.

Claims 1 and 3-16 were rejected under 35 U.S.C. §112, first paragraph, as lacking enablement. The Examiner argues that the full scope of the claims is allegedly not enabled. The Examiner found that the disclosure fails to provide adequate guidance pertaining to: (1) the *maximum* sequence lengths that will still result in retention of antiviral activity; (2) the *minimum* sequence lengths that will still result in retention of antiviral activity; (3) acceptable amino acid substitutions, additions, deletions, or modifications that will still result in retention of antiviral activity; and (4) the regions that modulate antiviral activity because the claims encompass an inordinate number of polypeptide variants with single or multiple amino acid additions, deletions, and/or substitutions. Additionally, the Examiner (citing Gait *et al.*, TRENDS IN BIOTECHNOLOGY, (1995), 13:430-438; and Hirsh *et al.*, JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, (1998) 24:1984-1991) noted that the state of the art as it pertains to antiviral development is replete with scientific obstacles. Thus, the Examiner concluded that it would require undue experimentation to practice the claimed invention. With respect to cancelled claim 3, this rejection is moot. With respect to the remaining claims, Applicant respectfully traverses this rejection.

While Applicant does not concede to the merits of the Examiner's rejection, in an effort to advance prosecution, the claims have been amended. Applicant submits that claim 1, and 4-16 as amended are enabled by the specification. The claims, as amended, specify a maximum and a minimum size for the polypeptide and limit the

amino acid replacements within SEQ ID NO:2. Claim 1, as amended, is adequately supported by the specification because it states that the amino acid replacement is only tryptophan. The claims that depend therefrom are similarly enabled. Claim 5, as amended, further limits the amino acid replacements to the leucine residues in SEQ ID NO:2 to that of a phenylalanine.

Additionally, the examples in the specification provide detailed experimental protocols for assessing the antiviral activity of a polypeptide as well as working examples of the polypeptides having antiviral activity. Accordingly, one of ordinary skill in the art, without undue experimentation, would be able to determine the polypeptides that have antiviral activity as the claims do not encompass an inordinate number of polypeptide variants. As such, the invention as claimed is enabled. In light of the foregoing, Applicant respectfully requests that this rejection under 35 U.S.C. §112, first paragraph, be withdrawn.

All of the claims remaining in the application are now believed to be allowable. Favorable consideration and a Notice of Allowance are earnestly solicited. If for any reason Examiner finds the application other than in condition for allowance, Examiner is requested to call the undersigned attorney at the Los Angeles telephone number (213) 633-6800 to discuss the steps necessary for placing the application in condition for allowance.

Respectfully submitted,
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